

ABSTRACT OF THE DISCLOSURE

There is disclosed an optical transmission system ensuring high-quality monitor control even if an optical
5 fiber fault occurs. A monitor instruction sending unit sends a monitor instruction. An operating condition recognizing unit receives a response signal and recognizes the operating condition. A filtering unit filters the monitor instruction and the response signal. A monitor
10 control unit monitors the operating condition of its own repeater in response to the monitor instruction, and generates resultant response information. A pump unit generates a pump light to cause Raman amplification within an optical fiber transmission medium. A regeneration
15 control unit performs a regeneration control of the response signal to thereby create a regenerated signal. A modulation control unit modulates the pump light by the response information or the regenerated signal to thereby generate the response signal. A photocoupler is connected
20 to the optical fiber transmission medium, and sends the response signal in a direction identical to or reverse to that in which an optical main signal travels.